

From said audio preamplifier circuit **28**, as illustrated in connection Figure 6D, high frequency band of output signals **74** ,demonstrated in Figure 1 flow chart, are connected to an input channel of a transmitter **86**. From a mid-range band of output audio signals **75** from said audio preamplifier circuit, a second connection is made to a second input channel of said transmitter. From a low band range of output signals **76**, a third connection is made to a third input channel of said transmitter. From the output section of said transmitter, the three bands of audio signals are connected to the input of a hybrid network **104**. From the output section of said hybrid network, said three bands of audio signals are then respectively connected to the input of a receiver **85**; in which, the three bands of signals that are connected from the output section of said hybrid network are received as passively enhanced audio signals that are provided for a side tone hereof.

Fig. 1 roughly illustrates a diagram of a one-way or a simplex-mode acoustic enhancement communication procedure consisting of an audio enhancing circuit that generates three bands of enhanced audio signals which thereby flow throughout the selectable components of the communication system for producing explicit audio signals thereof. Said communication system also consists of a hybrid network that is employed for producing a side tone in said communication system. In this manner, a box diagram demonstrates the flows of signals from an acoustic source such as a transducer **84**. From the output section of the microphone, plain or original audio signals are injected into a primary audio enhancing circuit, which happens to be a 3-way crossover network circuit, that hereby produces three bands of enhanced audio signals, thus, a band of high-range audio signals, a band of midrange audio signals and a band of low-range audio signals. From the output section of said 3-way crossover network circuit, the three bands of crossover audio signals are respectively injected into three channel of an audio preamplifier. From the output section of the preamplifier, the three bands of pre-amplified audio signals respectively flows into three input channels of a transmitter. From a first output channel of said transmitter, high-range band of audio signals from said transmitter flows to a first input channel of said hybrid network then outputs into a first input channel of a receiver. From a second output channel of said transmitter, midrange band of audio signal flows to a second input channel of said hybrid network. From a second output channel of said hybrid network, said midrange band of audio signal flows to a second input channel of said receiver. From a third output channel of said transmitter, a low-range band of audio signal flows to a third input channel of said hybrid network herein. From a third output channel of said hybrid network, said low band range of audio signals then flows to a third input channel of said receiver hereof. Fig. 6C illustrates display means respectively coupling to said receiver and Fig. 1 illustrates a block diagram of signal flowing throughout the communication system therein respectively flowing through said displaying means which results with the capabilities of exhibition for balancing and monitoring acoustic levels herein. In Fig. 6C, a display apparatus **27** is coupled respectively to the transistors of the receiver thereby displaying the status of the audio signals of said communication system herein.

An external dispensable port or external-acoustic connection implements a dispensable coupling method, which is entitled *The Reconcilable Voluntary Dispensable Coupling Method*. This extraneous coupling-method is briefly expressed in the following interpretations. Illustration Fig. 6B , Fig. 6E, Fig. 6F and Fig 6G demonstrates connection procedure, which is precondition according to the conditions that an audio enhancing circuit provides. For instance, a 3-way crossover network produces 3 bands of audio signals. Therefore, Fig. 6E illustrates the specified coupling arrangements of this manner etc. Accordingly, connections are made from an autonomous indispensable receiver section of a communication system to an external dispensable output-section, audio port, or a wireless acoustic system having said output audio section adapted for the voluntary coupling procedure that incorporates an audio reproductive system of a motor vehicle or other independent audio reproductive systems with a communication apparatus thereof. From the positive **15** output terminal of a transistor of a receiver section, a connection **70** is made to a series capacitor. At the opposite end of said series capacitor, contact is made to the positive terminal of the dispensable output port **87** of the receiver. From the negative terminal **14** of said dispensable output port, a conductor **44** comes in contact with an earth ground terminal in said receiver.

Fig. 5A to 5G. shows an audio cable comprising an integrated circuit adopted to couple externally with a communication apparatus and oppose a band of frequency. Wherein, a right side conductor wire is parallel to a left side conductor wire and they both flow in a separate parallel motion, having one side of the circuit conducting low range frequency and the other side conducting high range frequency. Internally, the integrated cable consists of two wires, which runs parallel until the output plug contact points. The cable further consists of two separate filter circuits adjacent to each other. Said integrated circuit is an insignificant segment of said audio cable. Therefore, the integrated circuit is not essential to said audio cable. Consequently, an alternative method of coupling the cable from said communication apparatus to an external reproductive system may exclude or omit said integrated circuit from the application. Thereby, said audio cable will be able to be employed as an independent entity and completely eliminates said integrated circuit from the coupling method or application herein.

Fig. 9 Illustrates a rough draft view of an audio signal flowchart demonstrating one band or one channel of audio signals communicating throughout an entire acoustic enhancement communication system. The method of one band or one channel communication employs a unique one-way tunable crossover network or tunable filter circuit having only one output channel whereby producing only one channel of plural band enhanced audio signals for communicating the enhanced audio signals to a communication system. Thereby, the one-way tunable crossover network or tunable filter circuit herein driving at least one full-range speaker or at least one various-range speaker system, which depends on the arrangement of the application hereof. Signals flow **53** from the output-section **26** of a microphone **84** then throughout the acoustic enhancement communication system. Horizontally to the right of said microphone is a one-way crossover network circuit or tunable filter circuit. From the output section of said microphone, original audio signals are sent to the input port **87** or input section of the 1-way crossover network circuit or tunable filter circuit **103** which consist of a 3-way crossover network, and a serial transmission IC timer circuit in which said original audio signals are generated into three, then one multi-band or one multi-channel of enhanced audio signals. The one band or one channel of filtered enhanced audio signals that emit from said 1-way crossover network circuit or tunable filter circuit is then applied to the input of an audio preamplifier **28**. Horizontally to the right of said audio preamplifier is an adjacent transmitter section **86** that is enclosed with an adjacent receiver in a transceiver device. The one band or channel of enhanced pre-amplified audio signals that output from said audio preamplifier is then injected into said adjacent transmitter section. From the output section of the transmitter, said one band or one channel of enhanced audio signals is injected to the input of a Hybrid Network **104**. Vertically to the left of the adjacent transmitter device **86** is the adjacent receiver section **85** in which the one channel of multi-bands or one band of enhanced audio signals from the output of said Hybrid Network are respectively injected to the input of the receiver section, Whereby, the received enhanced audio signals drives at least one full range speaker or a speaker system of the communication system hereof; providing that, said receiver section consist of an integrated retrieval circuit at the end audio circuit of said receiver that is able to retrieve the parent divided band of audio signals which was produced by the preceding 3-way crossover network circuit that was arranged to produce and output the divided bands of audio signals to the IC timer circuit then to said receiver section that includes the integrated retrieval circuit, thereby, retrieving the received enhanced audio signals that drives at least one full range speaker or at least one various-range speaker system of the receiver hereof.

The second communicative channel **102** of said audio enhancing circuit is connected to a section of an adjacent receiver, which thereby commences receiving the second acoustic communication enhancement procedure hereof. Audio signals which emit from a remote communication device therein containing indefinite, anonymous, poor or impaired audio quality **105** are capable of being received in another section of said adjacent receiver which thereby subsequently submit the anonymous or impaired quality signals to said second communicative channel of said at least one audio enhancing circuit in which the remotely communicated audio signals are received as enhanced communication audio signals. In this manner, the acoustical enhancement communicational procedure of said at least one audio enhancing circuit thereby magnificently improving **106** said anonymous, impaired or indefinite signals from said remote communication device thereof. This simplex/duplex acoustic enhancement communication mode is able to employs the first control technique entitled ***The Communicative Equilibrium Control Technique*** which enables the control of said two communicative channels in which said enhanced audio signals are able to be respectively monitored and tuned to equivalent predetermine settings while transmitting and receiving communication herein. The communicative equilibrium control procedure acquires the employment of an audio enhancing circuit, such as a crossover network circuit or other audio enhancing circuit having said two communicative channels which enables the channeling of communication signals therein. The communicative channels of the encircled application herein consist of an input section and an output section in which signals flow throughout and make subsequent channel connections thereof. Said two communicative channels extinguish communicational conflicts between the signals of the transmitting enhancement procedure and the signals of the receiving enhancement procedure hereof.

Fig. 8E shows a schematic rough draft diagram illustrating connections of an entire duplex-mode audio enhancement communication procedure which employs a variable one-way crossover network circuit or variable composite acoustic filter circuit as an audio enhancing circuit in which provides one control unit that respectively controls transmitting audio signals and receiving audio signals. In illustrative expression Fig. 8E, exclusive connections to the communication system is constituted in a transceiver device **77** from the IC timer circuit **54** of said audio enhancing circuit such as the variable one-way crossover network circuit or variable composite filter circuit **103** to the transmitter circuit then to the receiver circuit which is located in the transceiver device. From an acoustic source, such as a microphone, **84** original audio signals from the output section of said microphone are connected to an input port or an input section of said communicative channel one **101** of said audio enhancing circuit which is said variable one-way crossover network or variable composite acoustic filter circuit. In this manner, said communicative channel one of said audio enhancing circuit is able to channel the first communication enhancement procedure. From the output terminals of said communicative channel one of said audio enhancing circuit such as said one-way crossover network circuit or variable composite acoustic filter circuit and said IC timer circuit, a one band or single channel connection is made respectively to the input terminals of an audio amplifier, audio processor or the primary circuit of said transmitter **86**. From the output section of said transmitter, said one band or single channel connection is made respectively to the input of a Hybrid Network **104**. From the output of said Hybrid Network, said single channel or one band-connection is made to the input of a Radio Frequency Amplifier **96** of a receiver **85**. From the output section of the Radio Frequency Amp, signals are respectively connected to the input of a Demodulator **97** of said receiver. From the output of said Demodulator, said one band or single channel connection is made to the input of communicative channel two **102** of said audio enhancing circuit such as said variable one-way crossover network circuit or variable composites acoustic filter circuit and IC timer circuit for channeling the second enhancement procedure of audio signals herein.

From the output terminals of said communicative channel two of said audio enhancing circuit which is said variable one-way crossover network circuit or variable composite filter circuit and said IC circuit, another one-band single channel connection is made to the input of primary circuit, secondary circuit or an audio amplifier **98** of a receiver therein outputting one band or a single channel of enhanced amplified audio signals thereby driving an individual full range or dual cone speaker. The variable one output channel crossover network or variable composite acoustic filter circuit is adopted as an audio enhancing circuit for enhancing communication signals respectively to at least one band or at least one single channel of an associating component; whereby, said one-band or single channel of enhanced audio signals is capable of driving at least one speaker system. The flow and modification of audio communication signals are demonstrated in the diagram of Fig. 9A which briefly illustrates a complete duplex-mode acoustic enhancement communication system that expresses the flow and enhancement modification procedure of an audio enhancing circuit such as the tunable one-way crossover network circuit or tunable composite acoustic filter circuit in which produces at least one band of composite audio signals from an acoustic source such as a microphone then to said transmitter then to a remote receiver **109**; in which, the transmitted audio signals from the audio enhancing circuit, herein, are received in the remote receiver as magnificently refined perceivable audio signals. On the other hand, anonymous or impaired quality audio signals from a remote transmitter **108** are remotely transmitted to said communicative channel two of said audio enhancing circuit which therein channels the enhancement procedure in which enhances the anonymous or poor quality audio signals of the remote transmitter to refine value because of the subsequent interconnection with the adjacent receiver of said transceiver device. Therefore, said anonymous impaired or poor quality audio signals **105** are thereby received as a plurality of enhanced-band audio signals **106** of said adjacent receiver; providing that, said receiver section consist of an integrated retrieval circuit at the end audio circuit of said receiver that is able to retrieve the parent divided bands of audio signals which was produced by the preceding 3-way crossover network circuit that was arranged to produce and output the divided bands of audio signals to the IC timer circuit then to said receiver section that includes the integrated retrieval circuit whereby retrieves the received enhanced audio signals that thereby drives at least one a various range speaker system of the receiver hereof. Furthermore, this technique of conveying enhance audio signal in a communication system may employ a dispensable audio port adopted for voluntarily coupling said communication system to independent reproductive audio system or a motor vehicle's reproductive audio system hence reproducing said one-band or single channel of audio signals and enabling subsidiary authorization of said audio signals from said communication system to a user.

Fig. 8D illustrates a rough draft diagram of a stationary communication system, such as a house or stationary-commercial communication system, which employs an entire duplex-mode acoustical enhancement communication connection procedure which includes an audio enhancing circuit, such as an audio equalizer circuit **100** that has the first communicative channel **101** and the second communicative channel **102** that consist of one control unit **121** which thereby respectively controls transmitting audio signals and receiving audio signals.

A generalized aspect of the specification of the acoustic enhancement communicational application is expressed as follow: the preferred embodiment herein, which employs a simplex/duplex mode of acoustic communicational enhancement, thereby providing a vocal-simplex communication system or a duplex communication system such as a telephone, C.B radio, Two-way radio, Amateur radio, modem apparatus or other communication system comprising at least one audio enhancing circuit which is capable of enhancing acoustic signals and includes at least one communicative channel which channels the one-way acoustic enhancement communication procedure thereby channeling said acoustic enhancement communication procedure of said simplex or duplex communication system hereof. An the other hand, for implementing the duplex acoustic communicational enhancement mode said duplex communication system is capable of employing at least two communicative channels of said at least one audio enhancing circuit in which thereby produces enhanced acoustic signals thereby said at least two communicative channels are capable of channeling said acoustic enhancement procedure two-ways hereof. The first communicative channel selected from the group of said at least two communicative channels of said at least one audio enhancing circuit is communicative channel one which is employed for channeling the firsts acoustic enhancement communication procedure of originals audio signals thereby injecting the enhanced audio signals from said first communicative channel of said at least one audio enhancing circuit that provides said enhanced audio signals to a transmitter for respectively transmitting said enhanced audio signals into an adjacent receiver section which employs said enhanced audio signals for the presents of enhanced side tone audio signals herein. Anonymous, poor or impaired audio communication signals from remote communication device are disposed into a second adjacent receiver section which is interconnected with communicative channel two of said at least one audio enhancing circuit which thereby channels the second acoustic enhancement communication procedure and consequently enhances said anonymous, poor or impaired audio communication signals from said remote communication device herein.

A generalize aspect which interprets the prospects of alternative designs that this application may employ is presented: Specifications of an audio enhancing application which is tailored for the employment of communication systems may include sophisticated methods of balancing these audio enhancing circuits by applying impedance compensation circuits, attenuation circuits, or series notch filters for a flattering overall response and the technical audio enhancing circuit, and crossover network circuit design that is presented to the above application may be an active crossover network design. Filter circuits of said audio enhancing circuit may be based on various designs such as a Butterworth filter design, Chebychev filter design or Bessel designed filter circuit. In the audio enhancing circuits at least two specified ranged frequency signals may be adopted for enhancing a predetermined value for driving a relative corresponding magnetic field. For example, the high range of audio frequency signals is able to employ two bands of high range audio frequency signals, a band of high range frequency signals which bring emphasis to the high range audio tone or pitch and an adjacent band of high-midrange audio frequency signals whereby stressing the high-mid range audio tone or pitch, a midrange band of audio signals, a low-range of audio signals and an adjacent band of low-mid range audio frequency signals whereby stressing the designated low-midrange audio tone or pitch thereby emphasizing or/and banding signals to a specified magnetic field hereof. For filtering noise generating from a power source or any location within the system, a noise suppression circuit may be adopted herein to suppress the noise by means of grounding the circuit witch would naturally resolve the matter.

Claim 25 [new] The audio enhancement communication method of claim 16 wherein said at least one audio enhancing circuit is capable of producing at least one band of enhanced audio signals which is employed for driving at least one magnetic field or/and enhancing at least one band range of audio tone or pitch or/and accentuating at least one band range value audio tone or pitch of said communication system thereof.

Claim 26 [new] The audio enhancement communication method of claim 25 wherein said at least one band of audio signals produced by said at least one audio enhancing circuit is at least one narrow band of audio signals or at least one broadband of audio signals for specifically emphasizing specified perimeter of audio tone thereby inducing magnificent perception for magnificently communicating the enhanced audio signals to a verbal-simplex or duplex communication system in which communicates said enhanced audio signals to a user thereof.

Claim 27 [new] The audio enhancement communication method of claim 16 wherein said at least one audio enhancing circuit is an audio processing unit, an audio preamplifier circuit, an audio equalizer circuit, an audio amplifier circuit, an audio filter circuit, an audio enhancing circuit that employs at least one broadband range of audio signals, an audio enhancing circuit, such as, said audio equalizer circuit that employs at least one band or at least three bands of audio signals, a frequency divider circuit, such as, a crossover network circuit that employs at least two or at least three bands of audio signals or other audio enhancing circuit thereof.

Claim 28 [new] The audio enhancement communication method of claim 27 wherein said at least one audio enhancing circuit is at least one section of an audio enhancing circuit such as said audio preamplifier circuit, said audio equalizer circuit, said audio amplifier circuit, the audio signal processing circuit, said audio filter circuit, said crossover network circuit or other audio enhancing circuit of this nature.

- e) transmitting said enhanced audio signals in a first mode which is the transmission mode, and said enhanced audio signals from said at least one audio enhancing circuit are able to be received at a remote communication device as enhanced audio signals, and corresponding communication signals from said remote communication device are able to be enhanced in a manner of,
- f) channeling the remotely communicated receivable signals into the second communicative channel of said at least one audio enhancing circuit for distinctively channeling said acoustic enhancement communication procedure of said at least one audio enhancing circuit; in that manner, the input of said second communicative channel of said at least one audio enhancing circuit is interconnected at an output section of at least one integral circuit of an adjacent receiver; therein, said at least one audio enhancing circuit is able to enhance said remotely communicated receivable signals and subsequently dispose the enhanced remotely communicated signals to at least one subsequent circuit of said adjacent receiver thereof; where said adjacent receiver is capable of
- g) receiving said first communicative channel of enhanced audio signals of said at least one audio enhancing circuit from the adjacent transmitter to said adjacent receiver; in which, said at least one audio enhancing circuit enhances the quality value of side tone audio signals of said communication system thereof,

Claim 30 [new] The acoustical enhancement communicational method of claim 29 wherein said at least one acoustic source is a transducer, such as a microphone, an audio reproductive device such as an audio device that reproduce or playback audio signals or an audio tone generator device, such as, an audio device that generates audio signals, and thereby, said at least one audio enhancing circuit is capable of enhancing said audio signals that outputs from said at least one output section of said at least one acoustic source for communicating magnificently enhanced audio signals herein.

Claim 31 [new] The acoustical enhancement communicational method of claim 29 wherein said at least one audio enhancing circuit is at least one audio circuit that is capable of improving audio signals that derive from said at least one acoustic source, such as a vocal source in which the improved audio signals are adopted to explicitly communicate to a communication system, and said at least one audio enhancing circuit is capable of improving audio signals that is at least in part of "telephone quality" acoustic value; thereby, said at least one audio enhancing circuit is able to enhance said audio signals from the approximate perimeter of said "telephone quality" acoustic value to refined quality value in which may be at least in part of advanced quality, good quality, professional quality or even excellent quality audio signals hereof.

Claim 32 [new] The acoustical enhancement communicational method of claim 29 wherein said at least one communicative channel or said at least two communicative channels of said at least one audio enhancing circuit each employs said at least one input section and an at least one output section; whereby, said at least one audio enhancing circuit and the communicative channels are capable of inputting said original audio signals to the input section of the selected communicative channel which thereby channels said acoustic enhancement procedure and output said enhanced audio signals to a subsequent circuit of said communication system hereof.

Claim 33 [new] The acoustical enhancement communicational method of claim 29 wherein said at least one audio enhancing circuit employs at least one band of audio signals for specifically emphasizing specified range of audio tone thereby inducing magnificent perception for magnificently communicating said enhanced audio signals to a user thereof.

Claim 34 [new] The acoustical enhancement communicational method of claim 29 wherein said at least one audio enhancing circuit is integrated with or is an audio improvement circuit such as an audio processing circuit, an audio compression circuit an audio preamplifier circuit, an audio equalizer circuit, an audio amplifier circuit, an audio filter circuit, an acoustic frequency divider circuit or/ and other audio enhancing circuit, and thereby, said at least one audio enhancing circuit is capable of pre-amplifying, processing, equalizing, compressing, amplifying or dividing said audio signals, and therein, said enhanced audio signals are able to be disposed to said communication system; wherein, said communication system is a system of communication, such as a telephone, a two-way radio, a C.B radio, an amateur radio or other communication system thereof.

Claim 35 [new] The acoustical enhancement communicational method of claim 34 wherein said at least one audio enhancing circuit is at least one section of an audio enhancing circuit such as said audio preamplifier circuit, said audio equalizer circuit, said audio amplifier circuit, said audio processing circuit, said audio filter circuit or other audio enhancing circuit that enhances quality value of audio signals thereby reproducing said value of audio signals to enhanced quality value hereof.

Claim 36 [new] The acoustical enhancement communicational method of claim 29 wherein said at least one audio enhancing circuit further includes control means consisting of control circuits that are able to employ said at least two communicative channels which is said first communicative channel and said second communicative channel; in which, said first communicative channel and said second communicative channel of said at least one audio enhancing circuit are able to be controlled by one control unit hereby enabling equivalent control respectively to said first communicative channel, or said second communicative channel of said at least one audio enhancing circuit is further capable of alternatively employing two independent control units; hereby, the first control unit is able to separately control said first communicative channel as an independent control unit, and the second control unit is capable of separately controlling said second communicative channel as a second independent control unit therefore enabling distinctive control thereof, or from another alternative aspect, said at least one audio enhancing circuit is able to provide fixed components; whereby, said fixed components is capable of

- a) fixing the enhanced acoustic value of said at least one audio enhancing circuit; in a manner in which, said at least one audio enhancing circuit, acoustically enhancing said communication system at fixed values or rate hereof thereby employing said fixed components herein, such as fixed capacitors, fixed resistors, fixed inductors, etc; thus, said at least one audio enhancing circuit would be fixed at predetermine perimeter that is determined by the specification of the application hereof.



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Reply to Non-Compliant Amendment of 11/8/04 and
Office action of 8/8/05

Amendments to the Specification:

Please replace this section of the specification page [69 to page 70] with the following amended section of the specification:

Audio-Cell Acoustic Enhancement Communication

Abstract

[Page 69-70] A communication system (**41**) and (**77**) comprising at least one audio enhancing circuit (**47**) consisting of at least one input port or input section which is capable of inputting original audio signals from at least one output port or output section of at least one acoustic source, such a microphone. Furthermore, said at least one audio enhancing circuit is capable of enhancing said original audio signals to magnificently enhanced quality value that is at least in part of intelligible perimeter, in which is important for reasonable perception. Said magnificently enhanced quality value extends from the acoustic value of "telephone quality audio signals" thereto enhanced acoustic value. Thereby, said at least one audio enhancing circuit further employs at least one or two communicative channels which are able to channel the acoustic enhancement communication procedure in a simplex or duplex mode thereof and provides at least one band of audio signals or at least three bands of audio signals that are able to band predetermine audio signals for the emphasis of audio tone herein, and control means are provided to the audio enhancing circuit for controlling said audio signals and to provide a user with the option of subjective control while communicating said audio signals, or said at least one audio enhancing circuit is able to provide fixed components herein, such as fixed capacitors, fixed resistors, fixed inductors, et cetera for the implementation of fixed enchantment acoustic quality value thereof.